

**CLAIMS:** *The following is a list of all claims in the application with their status and the text of all active claims.*

1.-131. (CANCELED)

132. (CURRENTLY AMENDED) A method to allow a user of a local computer to access a remote computer file with a remote application, the method comprising the steps of:

- (a) providing a computer server system connected to a communications network;
- (b) the server system detecting the activation by the user of a hyperlink associated with the computer file;
- (c) operating on said computer server system an application program which is compatible with or capable of loading and operating upon said computer file, and has a graphical user interface;
- (d) opening the computer file in the application program; and
- (e) operating a thin client of the terminal emulation type on the local computer, the thin client allowing the user to provide input to the application program running on the remote computer, and

whereby control and protection of the computer file is retained, while providing simple and easy access to the user via said server-based applications delivered via thin client.

Claim 133. (CURRENTLY AMENDED) The method of claim 132, wherein the hyperlink ~~contains a unique identifier, and further wherein the method includes the step of associating the unique identifier with meta data identifying the computer file.~~ points to a network location or address associated with metadata identifying the computer file.

Claim 134. (PREVIOUSLY PRESENTED) The method of claim 132, wherein the application program is associated with the computer file after the activation of the hyperlink is detected.

Claim 135. (PREVIOUSLY PRESENTED) The method of claim 132, wherein multiple application programs are available to be associated with the computer file, and the associated application program is selected based on selection criteria chosen from the group comprising:

- (a) legal rights of the user to use the application programs;
- (b) capabilities of the application programs; and
- (c) properties that are associated with the hyperlink.

Claim 136. (CURRENTLY AMENDED) A method for handling incoming e-mails at an e-mail gateway comprising the steps of:

- (a) identifying a data file attachment on an incoming e-mail addressed to a recipient;
- (b) creating a copy of the identified attachment on a storage device accessible by the e-mail gateway;
- (c) creating a reference or hyperlink associated with the attachment copy;
- (d) deleting the attachment from the incoming e-mail and adding said hyperlink to the email;
- (e) operating on a remote computer remote from the recipient an application program associated with and compatible with the attachment copy;
- (f) opening the attachment copy in the application program running on the computer remote from the recipient upon activation of the hyperlink; and
- (g) operating a thin client on a local computer used by the recipient, the thin client allowing the recipient to provide input to and receive output from the application program running on the remote computer,

whereby the email attachment cannot pose a virus danger to said local computer since it is manipulated remotely, and whereas the local computer has no need of a compatible program to open said attachment.

Claim 137. (CURRENTLY AMENDED) A method for handling outgoing e-mails at an e-mail gateway comprising the steps of:

- (a) identifying a data file attachment on an outgoing e-mail addressed to a recipient;
- (b) creating a copy of the identified attachment on a storage device accessible by the e-mail gateway;
- (c) creating a hyperlink associated with the attachment copy;
- (d) replacing the identified attachment in the outgoing e-mail with the hyperlink;
- (e) forwarding the outgoing e-mail with the hyperlink to the recipient;
- (f) detecting an activation of the hyperlink by the recipient;
- (g) operating on a remote computer remote from the recipient an application program compatible with said attachment copy or file;
- (h) opening said attachment copy in said application program; and
- (i) operating a thin client on a local computer used by the email recipient, the thin client allowing the recipient to provide input to and receive output from said application program,

whereby control and protection of outgoing data attachments is retained by removing said data from outgoing emails, while giving appropriate access to recipients via server-based applications delivered via thin client.

Claim 138. (PREVIOUSLY PRESENTED) The method of claim 137, further comprising the step of imposing file access restrictions on said attachment copy.

Claim 139. (PREVIOUSLY PRESENTED) The method of claim 207, further comprising the step of setting a variable level of file access restrictions based upon a security level associated with the recipient, whereby attachment access can be varied according to the trust placed in a particular recipient individual as represented by said security level.

Claim 140. (PREVIOUSLY PRESENTED) The method of claim 207, further comprising the step of setting a variable level of access restrictions based upon a security level associated with the identified attachment, whereby attachment access can be varied according to the sensitivity of a particular attached document.

Claim 141. (CURRENTLY AMENDED) An application server comprising:

- (a) a network interface to communicate over a computer network;
- (b) at least one processing unit for running software programs and components;
- (c) an application remote-operation enabling program capable of operating an application program which has a GUI and transmitting the GUI of said application program in a terminal emulation mode via to a thin client operating on a remote computer, and providing remote interaction with the application program via the thin client over the computer network;
- (d) a storage device containing a computer file;
- (e) an association component that associates a hyperlink with the computer file;
- (f) a listener component ~~capable of that~~ detects an activation of the hyperlink over the computer network by the remote computer; and

- (g) an initiator component that, upon detection of the hyperlink activation, opens the computer file in said application program and transmits the graphical user interface of said application program to the thin client operating on the remote computer,  
  
whereby control and protection of the computer file is retained, while giving appropriate access to recipients via said server-based applications delivered via thin client.

Claim 142. (PREVIOUSLY PRESENTED) The application server of claim 141, wherein the at least one processing unit is selected from the group consisting of:

- (a) a single server;
- (b) a personal computer; and
- (c) multiple, separate computers operating as a single, logical server.

Claim 143. (CURRENTLY AMENDED) A method comprising the steps of:

- (a) providing a computer server system which is connected to a communications network and which contains executable code of at least one server-based computer application which operates natively with a graphical user interface,
- (b) providing an application hyperlink that is associated with said server-based application,
- (c) providing a computing device to at least one recipient user which is connected to said communications network,
- (d) providing ~~hyperlink activation means~~ computer software executable code on the recipient user's computing device which ~~for~~ activates said application hyperlink,
- (e) providing computer software executable code ~~hyperlink detection means~~ on said computer server system which detects the activation of the hyperlink by said recipient user's computing device, and

- (f) providing computer software executable code means on said computer server system which ~~for~~ selects and launches said server-based computer application,
- (g) providing computer software executable code means on said computer server system ~~for~~ which transmits the graphical user interface of said server-based computer application to said recipient user's computing device in a terminal emulation mode, and receives inputs to said graphical user ~~human~~ interface from the user; and
- (h) providing thin client computer software executable code means on said recipient's computer which ~~can~~ receives and displays said graphical user interface ~~human interface~~ from said computer server system, and ~~can accept and~~ transmits the inputs of said recipient user back to the server-based application,

whereby a wide variety of potentially anonymous users are provided simple and easy access to said server-based applications delivered via thin client, irrespective of the operating system and the overall capabilities of the recipient's computer, and allowing effortless access to virtually any application to be placed anywhere a hyperlink can be placed, such as an email or web page.

Claim 144. (CURRENTLY AMENDED) The method of claim 143, comprising the additional steps of:

- (a) providing computer software executable code ~~application hyperlink generation means~~ on said computer server system for creating said application hyperlink; and
- (b) ~~providing means for~~ transmitting said application hyperlink to said at least one recipient user,

whereby a wide variety of potentially anonymous users are provided simple and easy access to said server-based communications applications delivered via thin client, irrespective of the operating system and the overall capabilities of the recipient's

computer, and allowing effortless access to virtually any communications application to be placed anywhere a hyperlink can be placed, such as an email or web page.

Claim 145. (CURRENTLY AMENDED) The method of claim 143, wherein said server-based computer application comprises ~~a first communications means consisting of~~ a first communications program or application.

Claim 146. (CURRENTLY AMENDED) The method of claim 145, comprising the additional steps of:

- (a) providing a second communications program or application ~~communications means~~ to one or more additional users which are compatible with or capable of communicating with said first communications program; and
- (b) providing address configuration computer executable code on said server system which configure said first communications means with the communications address of said one or more additional users,

whereby a wide variety of potentially anonymous users are provided simple and easy access to said server-based communications applications delivered via thin client, irrespective of the operating system and the overall capabilities of the recipient's computer, and allowing effortless access to virtually any communications application to be placed anywhere a hyperlink can be placed, such as an email or web page, and allowing easy communication with said second communications means because of the adding of an address, potentially of the sender, to said first communications means.

Claim 147. (CURRENTLY AMENDED) The method of claim 146, wherein said first and second communications ~~means~~ program or application comprises programs selected from the group consisting of:

- (a) an email program;
- (b) an instant messaging program;
- (c) a voice-over-internet-protocol program;
- (d) a video conferencing program; and
- (e) an internet relay chat application.

Claim 148. (PREVIOUSLY PRESENTED) The method of claim 212, wherein said server-based application comprises a computer visual interface desktop work area, and further comprising the steps of:

- (a) providing one or more native software server-based applications and
- (b) providing access to or links to said one or more native software server-based applications within said computer visual interface desktop work area,

whereby a wide variety of potentially anonymous users are provided simple and easy access to said server-based applications delivered via thin client, irrespective of the operating system and the overall capabilities of the recipient's computer, and allowing effortless access to virtually any application to be placed anywhere a hyperlink can be placed, such as an email or web page.

Claim 149. (PREVIOUSLY PRESENTED) The method of claim 217, wherein said native software applications comprise applications selected from a group consisting of:

- (a) an email program,
- (b) an instant message program,
- (c) stock quote program,



- (d) news delivery program,
- (e) weather delivery program,
- (f) a group scheduling program,
- (g) a data file storage program; and
- (h) a calendar program.

Claim 150 (PREVIOUSLY PRESENTED) The method of claim 148 used in conjunction with a commercial service, further comprising the step of:

providing access to said computer visual interface desktop to subscribers of said commercial service, whereby said application hyperlink recipient may utilize said visual interface desktop in a manner similar to accessing a personalized home web page which utilizes html or javascript code, but with the full functionality of standard software applications instead of the limited functionality of said html or javascript code.

Claim 151. (CURRENTLY AMENDED) A method to allow remote users to access computer files with server-based applications by activating a hyperlink, the method comprising the steps of:

- (a) providing a computer server system connected to a communications network, the server system having access to at least one computer file and to executable code for at least one file-compatible server-based application which operates natively with a graphical user interface, the at least one application being adapted to open said at least one computer file;
- (b) providing an application file hyperlink that is associated with said at least one computer file;
- (c) providing at least one remote recipient user computing device to at least one hyperlink recipient user which is connected to said communications network;

- (d) providing computer software executable code ~~hyperlink-activation means~~ on the at least one remote recipient user computing device for activating said application file hyperlink over said communications network;
- (e) providing computer software executable code ~~hyperlink-detection means~~ on said computer server system which detects the activation ~~execution~~ of the hyperlink by said hyperlink recipient user over said communications network;
- (f) providing a thin client application or program ~~thin-client means~~ on said at least one remote recipient user computer adapted to receive and display said graphical user interface of said file-compatible server-based computer application in a terminal emulation mode, and accept and transmit inputs of said user back to the server-based application;
- (g) providing computer software executable code ~~means~~ on said computer server system adapted to select and start said file-compatible server-based computer application in a user session;
- (h) providing computer software executable code ~~file means~~ on said computer server system which opens said computer file in said file-compatible server-based computer application; and
- (i) providing computer software executable code ~~means~~ on said computer server system for transmitting the human graphical user interface of said file-compatible server-based computer application to the at least one remote recipient user computer in a terminal emulation mode and to receive inputs to said interface from the at least one hyperlink recipient user.

Claim 152. (CURRENTLY AMENDED) The method of claim 151, further comprising the step of providing computer software executable code ~~hyperlink-generation means~~ for creating said application file hyperlink and associating the hyperlink with said at least one computer file.

Claim 153. (CURRENTLY AMENDED) The method of claim 151, further comprising the step of ~~providing hyperlink transmission means for~~ transmitting said application file hyperlink to said at least one hyperlink recipient user;

Claim 154. (PREVIOUSLY PRESENTED) The method of claim 151, wherein said communications network comprises an internet.

Claim 155. (PREVIOUSLY PRESENTED) The method of claim 151, wherein said communications network comprises a local area network.

Claim 156. (PREVIOUSLY PRESENTED) The method of claim 151, wherein said hyperlink comprises a uniform resource locator.

Claim 157. (PREVIOUSLY PRESENTED) The method of claim 151, further comprising the steps of:

- (a) disassociating said application file hyperlink from said at least one computer file; and
- (b) associating said application file hyperlink with at least one different computer file.

Claim 158. (PREVIOUSLY PRESENTED) The method of claim 151, additionally comprising the step of modifying the application interface capability function settings of said file-compatible server-based computer application.

Claim 159. (PREVIOUSLY PRESENTED) The method of claim 151, wherein the recipient user computer is of a type selected from the group consisting of:

- (a) a personal computer;
- (b) a personal digital assistant;
- (c) a web or internet appliance device; and
- (d) a television set-top box.

Claim 160. (CURRENTLY AMENDED) The method of claim 152, wherein the graphical user interface of said hyperlink generation computer software executable code comprises a web page form.

Claim 161. (CURRENTLY AMENDED) The method of claim 151, further comprising the step of providing computer software executable code on said computer server system ~~file access and manipulation restriction means~~ which restricts said recipient user's access to and manipulation of said at least one computer file.

Claim 162. (CURRENTLY AMENDED) The method of claim 161, wherein said at least one file-compatible server-based application ~~file restriction means~~ ~~comprises a~~ is partially disabled ~~file-compatible server-based application~~.

Claim 163. (CURRENTLY AMENDED) The method of claim 161, wherein the ~~said file restriction means~~ comprises a partially disabled thin-client application.

Claim 164. (PREVIOUSLY PRESENTED) The method of claim 161, wherein said file access and manipulation restrictions are selected from the set consisting of:

- (a) whether the data file may be accessed;
- (b) a number of times the data file may be accessed;
- (c) a particular time period during which the file may be accessed;
- (d) whether said hyperlink recipient user may print the data file locally;
- (e) whether said hyperlink recipient user may save said first data file locally onto said remote recipient user computing device;
- (f) whether said data file or portions thereof may be copied onto the local computer memory clipboard of the remote recipient user computing device;

- (g) whether, after alteration by said recipient user, said data file or portions thereof may be saved onto said computer server system, whereby the original copy of said data file is replaced by the altered file, and said application file hyperlink is now associated with said altered file, and
- (h) whether, after alteration by said recipient user, said data file or portions thereof may be saved onto said computer server system, whereby the original copy of said data file is not replaced by the altered file and remains on the storage system of said server system.

Claim 165. (PREVIOUSLY PRESENTED) The method of claim 161, wherein said file restriction means are varied depending upon parameters of said specific session selected from the group consisting of:

- (a) the identity of said hyperlink recipient user;
- (b) the network address of said hyperlink recipient user;
- (c) whether a qualifying action has been performed by said recipient user; and
- (d) whether authentication information has been provided by said hyperlink recipient user.

Claim 166. (PREVIOUSLY PRESENTED) The method of claim 165, wherein said authentication information is selected from the group consisting of:

- (a) a password;
- (b) the network address of said hyperlink recipient user;
- (c) a digital signature, and
- (d) information provided via the HTTP authentication protocol.

Claim 167. (PREVIOUSLY PRESENTED) The method of claim 165 ~~75~~, wherein said qualifying action is accepting an agreement.

Claim 168. (PREVIOUSLY PRESENTED) The method of claim 167 ~~73~~, wherein said agreement obligates the recipient user to limit disclosure of the content of said data file.

Claim 169. (PREVIOUSLY PRESENTED) The method of claim 167 ~~77~~, wherein said agreement is a license agreement.

Claim 170. (PREVIOUSLY PRESENTED) The method of claim 153 ~~63~~, wherein said hyperlink is transmitted using means selected from the following group:

- (a) an email message;
- (b) an instant messaging application;
- (c) a hyperlink embedded in a web page;
- (d) a telephone;
- (e) an appropriately formatted document or file; and
- (f) a pager.

Claim 171. (PREVIOUSLY PRESENTED) The method of claim 151 ~~61~~, comprising the additional steps of:

- (a) providing executable code on said computer server system for producing a computer visual interface desktop work area,
- (b) providing access to or links to said file-compatible application on the visual interface desktop,
- (c) providing access to or links to zero or more additional applications on the visual interface desktop,
- (d) providing access to or links to said at least one computer file or document on the visual interface desktop; and

wherein said thin client means on said at least one remote recipient computer are adapted to receive and display said computer visual interface desktop work area.

Claim 172. (PREVIOUSLY PRESENTED) The method of claim 151 ~~64~~, additionally comprising the steps of:

- (a) after detecting said hyperlink activation, assigning a guest account to said recipient user; and
- (b) creating a copy of said at least one computer file in the guest account; and
- (c) opening the file copy in said file-compatible server-based application instead of the original computer file.

Claim 173. (CURRENTLY AMENDED) The method of claim 172 ~~82~~, wherein the guest account is created ~~before being assigned to the user~~ after detecting said hyperlink activation.

Claim 174. (CURRENTLY AMENDED) ~~The method of claim 82, wherein the guest account is deleted upon the closing of the computer file by the user.~~ The method of claim 172, further comprising the steps of:

- (a) deleting said guest account upon the closing of the computer file by the user, or
- (b) deleting or cleaning data items from said guest account and returning said guest account to available status upon the closing of the computer file by the user.

Claim 175. (PREVIOUSLY PRESENTED) The method of claim 172 ~~82~~, further comprising the step of predefining a plurality of guest accounts, and further wherein one of the predefined guest accounts is assigned to the user after hyperlink activation.

Claim 176. (CURRENTLY AMENDED) The method of claim 172 ~~85~~, wherein said guest account is unassigned or returned to available status upon the closing of the computer file by the user.

Claim 177. (CURRENTLY AMENDED) The method of claim 151 ~~64~~, wherein said at least one computer file comprises a first computer file and at least one additional computer file, and wherein said application file hyperlink is associated with both the first and the additional computer files, and comprising the additional steps of:

- (a) operating on a remote computer a plurality of application programs, said plurality of programs having at least one program compatible with or capable of opening each of said computer files;
- (b) opening the computer files in said plurality of application programs; and
- (c) transmitting the graphical user interface of said plurality of application programs to said thin client means in a terminal emulation mode.

Claim 180. (CURRENTLY AMENDED) The method of claim 151 ~~64~~, further comprising the step of providing means for at least one additional user using at least one additional remote user computing device to view and optionally interact with the interface of said file-compatible server-based computer application in a terminal emulation mode, whereby the additional user and the first hyperlink recipient user may engage in simultaneous collaboration over said file or document.

Claim 181. (PREVIOUSLY PRESENTED) The method of claim 151 ~~64~~, wherein said method is provided by an entity as a service and further comprising the step of providing subscription means associated with said service whereby a remote hyperlink recipient user who is not a subscriber of said entity is solicited to subscribe to said service.

Claim 182. (PREVIOUSLY PRESENTED) The method of claim 151 ~~64~~, wherein a log of accesses to said computer file is kept on said computer server system.

Claim 183. (CURRENTLY AMENDED) The method of claim 151 ~~64~~, further comprising the step of notifying at least one designated user who is not said least one remote recipient user upon the occurrence of hyperlink access events. ~~selected from the group consisting of:~~



~~(a) hyperlink activation;~~

~~(b) file access; and~~

~~(c) file alteration.~~

Claim 184. (PREVIOUSLY PRESENTED) The method of claim 183 93, wherein said notification utilizes transmission means selected from the group consisting of:

(a) an email application;

(b) an instant message application;

(c) a telephone; and

(d) a pager.

Claim 185. (PREVIOUSLY PRESENTED) The method of claim 183 93, wherein said notification includes details about said hyperlink access events.

Claim 186. (PREVIOUSLY PRESENTED) The method of claim 185 95, wherein said details about said hyperlink access events comprises data selected from the group consisting of:

(a) details about said hyperlink recipient user;

(b) the time of activation of said application file hyperlink;

(c) information about said file associated with said application file hyperlink;

(d) the network location of said hyperlink recipient user;

(e) information about any changes to said data file.

Claim 187. (PREVIOUSLY PRESENTED) The method of claim 151 61, wherein said computer server system comprises a computing machine configuration selected from the group consisting of:

- (a) a single server;
- (b) a personal computer.
- (c) multiple, separate computers operating as a single, logical server.

Claim 188. (PREVIOUSLY PRESENTED) The method of claim 151, wherein the computer software executable code which detects the execution of the hyperlink by said hyperlink recipient user operates on a computing device physically separate from the remainder of said server system but connected through said communications network ~~the hyperlink activation is detected on a detection computer separate from the remote computer.~~

Claim 189. (old claim 189) The method of claim ~~187~~ 61, wherein ~~the application program and the computer file are stored on a storage device not directly connected to the remote computer~~ one of said multiple, separate computers operating as a single, logical server comprises a computer operating as an application server.

Claim 190 (CANCELLED)

Claim 191. (PREVIOUSLY PRESENTED) The method of claim ~~151~~ 61, further comprising the step of downloading the thin client from the server system to said at least one remote recipient user computing device .

Claim 192. (PREVIOUSLY PRESENTED) The method of claim ~~191~~ 101, wherein the step of downloading the thin client occurs only after said at least one remote recipient user computing device is examined and found not to already have the thin client available.

Claim 193. (CURRENTLY AMENDED) The method of claim ~~151~~ 61, wherein the step of opening the computer file occurs only after a determination is made that the hyperlink associated with the computer file is still active or enabled.

Claim 194. (PREVIOUSLY PRESENTED) The method of claim 151 ~~61~~, wherein changes are made to the computer file after the hyperlink is created, and the hyperlink remains associated with the latest version of the computer file.

Claim 195. (PREVIOUSLY PRESENTED) The method of claim 151 ~~61~~, wherein the application program is not operating on the remote computer until after the activation of the hyperlink is detected.

Claim 196. (PREVIOUSLY PRESENTED) The method of claim 151 ~~61~~, wherein said means for selecting said file-compatible application is adapted to make said selection after considering criteria selected from the group consisting of:

- (a) information about optimum applications for viewing of said file;
- (b) information about optimum applications for manipulation of said file;
- (c) said recipient user's legal rights to use available file-compatible applications; and
- (d) usage permissions associated with said available file-compatible applications.

Claim 197. (PREVIOUSLY PRESENTED) The method of claim 196 ~~106~~, wherein the recipient user's legal rights are established by criteria selected from the group consisting of:

- (a) the provision of valuable consideration by said recipient user in exchange for rights to use available file-compatible application;
- (b) the provision by said recipient user of information authenticating the recipient user's legal rights to use available file-compatible applications; and
- (c) the subscription by said recipient user to rights to use said available file-compatible application.

Claim 198. (PREVIOUSLY PRESENTED) The method of claim 161 ~~71~~, further comprising the steps of:

- (a) providing a user group comprising at least one member user with access to an email account;
- (b) intercepting all incoming emails for said user group prior to delivery to the email accounts of the at least one member user of said user group;
- (c) screening said incoming emails for attached data files,
- (d) removing said attached data files and storing said attached data files on the said computer server system;
- (e) creating an application file hyperlink to said attached data files;
- (f) appending said application file hyperlink to an incoming email to which said attached data file had been attached;
- (g) forwarding said incoming email without the attached file to the intended member user's email account; and
- (h) said member user accessing said attached data file by activating said application file hyperlink.

Claim 199. (PREVIOUSLY PRESENTED) The method of claim 161 ~~74~~, further including the steps of:

- (a) providing a user group consisting of at least one member user with access to an email account;
- (b) automatically intercepting all outgoing emails for said user group;
- (c) automatically screening said outgoing emails for attached data files;
- (d) automatically removing the attached data file from the outgoing email and storing said attached file on the server;

- (e) said computer server system creating an application file hyperlink to said attached files;
- (f) said computer server system appending said hyperlink to said outgoing email;
- (g) said server forwarding said incoming email without the attached file to its intended recipient's email account; and
- (h) said intended recipient accessing said attached file by activating said application file hyperlink.

Claim 200. (PREVIOUSLY PRESENTED) The method of claim 198 ~~108~~, further comprising the step of centrally setting parameters of the file access and manipulation restrictions for said user group.

Claim 201. (NEW) The method of claim 161, wherein the recipient user's file access and manipulation restrictions are variable.

Claim 202. (NEW) The method of claim 183, wherein said hyperlink access events are selected from the group consisting of:

- (a) hyperlink activation;
- (b) file access; and
- (c) file alteration.

Claim 203 (NEW) The method of claim 187, wherein one of said multiple, separate computers operating as a single, logical server comprise a computer operating as a file server.